

REMARKS

Claims 1-15 remain pending in this patent application.

PRIORITY DOCUMENT

Applicant is mystified by the Examiner's statement on page 2 of the Office Action that a certified copy of the priority document has not been filed. The document was filed on February 12, 2004 and is listed as a "Certified Copy of Foreign Priority Application," a 34 page document, in the Image File Wrapper in PAIR.

Applicant respectfully requests that the Examiner acknowledge receipt of the priority document.

PRIOR ART REJECTION

Claims 1-15 have been rejected under 35 USC § 103(a) as being unpatentable over US 2001/0051548 A1 (Iwata et al.). Applicant traverses this rejection insofar as it might be deemed applicable to any of claims 1-15 as now presented.

In the method disclosed and claimed in this application, a computer is used to determine stresses at finite elements of a club head model occurring due to impact of the model with a finite model of a golf ball. Stresses occurring at finite elements within a reference hitting position set in a sweet area of a face part of said club head model are compared with stresses occurring at elements within comparison hitting positions set outside said sweet area. Based on the comparison, the thickness of elements is controlled so that stresses in the comparison hitting positions are approximated with stresses in the reference hitting position. More particularly, the thicknesses of elements in the comparison hitting positions are made thicker or thinner to bring about the approximation of stresses in the comparison hitting positions and the reference hitting position, whereby the stresses in the comparison hitting positions and the reference hitting position are made uniform. From the disclosed and claimed method, the thickness of different regions of a club head can be optimized for restitution and strength properties without extensive use of time-consuming and expensive trial-and-error techniques previously used for the design of a club head.

Without acquiescing in the rejection, Applicant has amended claim 1 to incorporate subject matter that had been recited in claim 2 and has deleted this subject matter from claim 2. Also, Applicant has made minor editorial changes to claims 11-15.

Iwata et al. discloses a club head in which the thickness variation of the club face is adjusted so as to obtain a "flexural range" that generally coincides with a golfer's impact distribution pattern, so that reduction in carry of a golf ball resulting from impact away from the sweet spot can be minimized without unduly compromising the strength of the club face. In the design of such a club head, Iwata et al. employ finite analysis, applied to three different models of a club face, for determining stresses occurring at different points on the club face. However, there is no disclosure in Iwata et al. of using a finite element analysis of a golf ball impacting a club face, and there is no disclosure in Iwata et al. of selectively thickening and/or thinning finite elements of a club head so as to approximate stresses occurring in "comparison hitting positions" with stresses occurring in a "reference hitting position," as clearly required by Applicant's claims. In particular, there is no disclosure in Iwata et al. of thickening elements at comparison hitting positions where stresses are greater than stress at the reference hitting position or of thinning elements at comparison hitting positions where stresses are lower than stress at the reference hitting position so that values of stresses at comparison hitting positions are approximated to a stress value at the reference hitting position, as required by Applicant's claims.

In items 6 and 10, on pages 3 and 5, respectively, of the Office Action, the Examiner refers to "Galloway." Applicant does not understand the relevance of these references to a rejection based on Iwata et al. alone.

In view of the foregoing observations, Applicant submits that a fair reading of Iwata et al. cannot properly serve as a basis for rejecting claim 1, as amended herein, and dependent claims 2-15, under 35 USC§ 103(a).

OTHER PRIOR ART

Applicant has considered the other prior art cited by the Examiner. Applicant is not commenting on this prior art, because it was not applied against the claims in this application.

CONCLUSION

In view of the amendments, observations and arguments presented herein, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection stated in the outstanding Office Action and recognize all of the pending claims as allowable.

If unresolved matters remain in this application, the Examiner is invited to contact Frederick R. Handren, Reg. No. 32,874, at the telephone number provided below, so that these matters can be addressed and resolved expeditiously.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By

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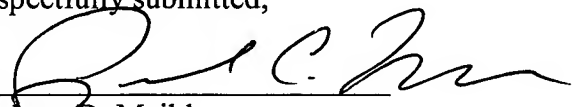
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